AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled:

1. (Original) An apparatus for providing a light beam with spatially varying polarization, the apparatus comprising:

two circumferentially curved reflectors positioned substantially opposite each other,

a polarizer positioned in an optical path between the two reflectors, for polarizing light reflected from one reflector before it reaches the other;

whereby a non-polarized light beam incident along a given axis on one of the reflectors is radially reflected off that reflector, acquires predetermined polarization from the polarizer and is then reflected off the second reflector to a light beam of spatially varying polarization.

2. (Original) The apparatus as claimed in Claim 1, wherein the two reflectors comprise a diverging reflector and a converging reflector.

3. (Original) The apparatus as claimed in Claim 1, wherein the two reflectors comprise two converging reflectors.

4. (Original) The apparatus as claimed in Claim 1, wherein the two reflectors are spherical.

5. (Original) The apparatus as claimed in Claim 1, wherein the two reflectors are conical.

6. (Original) The apparatus as claimed in claim 5, wherein the two reflectors have each apex angle of between 20° and 75 ° with respect to the given axis.

7. (Original) The apparatus as claimed in claim 1, wherein the two reflectors are paraboloidal, with a common focus.

8. (Original) The apparatus as claimed in claim 1, wherein one of the two reflectors is hyperboloidal and the other of the two reflectors is ellipsoidal, with a common focus.

9. (Original) The apparatus as claimed in claim 1 in which the polarizer is radially polarizing with respect to the given axis.

10. (Original) The apparatus as claimed in claim 1 in which the polarizer is azimuthally polarizing with respect to the given axis.

11. (Original) The apparatus as claimed in claim 1 in which the polarizer is diagonally polarizing with respect to the given axis.

12. (Original) The apparatus as claimed in claim 1 in which the polarizer includes more than one polarization orientation.

13. (Original) The apparatus as claimed in Claim 1 further comprising a quarter-wave plate and a second plarizer positioned in a path of an outgoing beam after it leaves the two reflectors.

14. (Original) The apparatus as claimed in Claim 13, wherein the second polarizer is oriented at 45° with respect to the quarter-wave plate.

15. (Original) A method for providing a light beam with spatially varying polarization, the method comprising:

providing two circumferentially curved reflectors positioned substantially opposite each other,

providing a polarizer positioned in an optical path between the two reflectors, for polarizing light reflected from one reflector before it reaches the other;

directing a non-polarized light beam along a given axis onto one of the two reflectors, so that it is reflected off that reflector to the other reflector, acquiring predetermined polarization as it passes through the polarizer, and reflected off the other reflector as an outgoing light beam,

whereby the outgoing beam acquires varying spatial polarization.

16. (Original) The method as claimed in Claim 15, wherein providing two circumferentially curved reflectors positioned substantially opposite each other the two reflectors includes providing a diverging reflector and a converging reflector.

17. (Original) The method as claimed in Claim 15, wherein providing two circumferentially curved reflectors positioned substantially opposite each other the two reflectors includes providing two converging reflectors.

18. (Original) The method as claimed in Claim 15, wherein providing two circumferentially curved reflectors positioned substantially opposite each other the two reflectors includes providing two reflectors that are spherical.

19. (Original) The method as claimed in Claim 15, wherein providing two circumferentially curved reflectors positioned substantially opposite each other the two reflectors includes providing two reflectors that are conical.

20. (Original) The method as claimed in Claim 19, wherein providing two circumferentially curved reflectors positioned substantially opposite each other the two reflectors includes providing two reflectors, which have each apex angle of between 20° and 75 ° with respect to the given axis.

21. (Original) The method as claimed in Claim 15, wherein providing two circumferentially curved reflectors positioned substantially opposite each other the two reflectors includes providing two reflectors, which are paraboloidal, with a common focus.

22. (Original) The method as claimed in Claim 15, wherein providing two circumferentially curved reflectors positioned substantially opposite each other the two

reflectors includes providing two reflectors one of which is hyperboloidal and the other reflector is ellipsoidal, with a common focus.

23. (Original) The method as claimed in Claim 15, wherein providing a polarizer positioned in an optical path between the two reflectors includes providing a polarizer, which is radially polarizing with respect to the given axis.

24. (Original) The method as claimed in Claim 15, wherein providing a polarizer positioned in an optical path between the two reflectors includes providing a polarizer, which is azimuthally polarizing with respect to the given axis.

25. (Original) The method as claimed in Claim 15, wherein providing a polarizer positioned in an optical path between the two reflectors includes providing a polarizer, which is diagonally polarizing with respect to the given axis.

26. (Original) The method as claimed in Claim 15, wherein providing a polarizer positioned in an optical path between the two reflectors includes providing a polarizer, which includes more than one polarization orientation.

27. (Original) The method as claimed in Claim 15, further comprising providing a quarter-wave plate and a second plarizer positioned in a path of an outgoing beam after it leaves the two reflectors.

28. (Original) The method as claimed in Claim 27, wherein the second polarizer is oriented at 45° with respect to the quarter-wave plate.

29-30. (Cancelled)